

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the Application:

**Claims 1-10 (canceled)**

**Claim 11 (amended)** A process ~~Process~~ for vacuum deposit on a substrate of at least one layer of amorphous hafnium oxide by reactive evaporation under oxygen, of metallic hafnium, the process characterised in that the deposit is carried out without energy input to the substrate.

**Claim 12 (amended)** The process ~~Process~~ according to claim 11, characterized ~~characterised~~ in that the deposit is interrupted, and then restarted, to allow the substrate to cool.

**Claim 13 (amended)** The process ~~Process~~ according to claim 11, characterized ~~characterised~~ in that the substrate is cooled during deposit or during periods of interruption of deposit.

**Claim 14 (new):** The process according to claim 11, wherein at least one layer of the deposited amorphous hafnium oxide has a density between 6.4 and 8.1 gm/cm<sup>3</sup>.

**Claim 15 (new):** The process according to claim 11, wherein at least one layer of the deposited hafnium oxide has a density lower than 8 gm/cm<sup>3</sup>.

**Claim 16 (new):** The process according to claim 11, wherein a stack of layers is formed.

**Claim 17 (new):** The process according to claim 16, wherein the stack also includes at least one layer formed of a material having a refractive index different from that of hafnium oxide.

**Claim 18 (new):** The process according to claim 11, wherein said at least one layer of hafnium oxide is deposited under vacuum by reactive evaporation under oxygen of metallic hafnium.

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**Claim 19 (new):** Process as claimed in Claim 11, wherein a stack comprising at least one layer of another material is formed on a surface of the deposited amorphous hafnium oxide layer.

**Claim 20 (new)** Process as claimed in Claim 19, wherein said another material comprises silicon oxide.

**Claim 21 (new)** Process as claimed in Claim 19, wherein the stack comprises alternate layers of amorphous hafnium oxide having a density less than  $8 \text{ gm/cm}^3$  and another material.

**Claim 22 (new)** The process as claimed in Claim 21, wherein said another material comprises silicon oxide.

**Claim 23 (new)** A process for forming an optical component which comprises vacuum depositing on a substrate at least one layer of amorphous hafnium oxide by the process of claim 11.

**Claim 24 (new)** The process according to claim 23, wherein the at least one layer of hafnium oxide comprises amorphous hafnium oxide having a density less than  $8 \text{ gm/cm}^3$ .

**Claim 25 (new)** The process according to claim 24, wherein the optical component comprises a mirror.

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